

PREVALENCE OF *TRICHOMONAS VAGINALIS* AMONG FEMALE RESIDENCE IN ABA NORTH LOCAL GOVERNMENT, ABIA STATE, NIGERIA.

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ABSTRACT

A study on the prevalence of Trichomoniasis in Aba north local Government area was investigated using high vaginal swab with a total of 100 women screened for the infection. The result revealed that 13% of the total population screened was infected with Trichomonas vaginalis. Women within the age of 18-26 had the highest prevalence of 20.75% compared to other age groups. The prevalence as regards to educational level showed that those with little or no education had the highest prevalence rate of 21.95% compared to others while the prevalence in relation to occupation revealed that traders and/or business men and students had the highest prevalence of 17.6% and 13.0% respectively. Trichomonas vaginalis is a common sexually transmitted disease and has important medical, social and economic implications. Proper sex education especially for the adolescent and youths should be intensified to help create awareness on the medical implications of sexually transmitted disease (STD) and hence reduce the spread and other health complications associated with the infection.

Keywords: Trichomoniasis, Trichomonas vaginalis, Prevalence.

INTRODUCTION

Trichomoniasis has emerged one of the prevailing sexually transmitted infections caused by a pear-shaped protozoan called *Trichomonas vaginalis*; affecting approximately 180 million people worldwide per year, making it the most common non-viral STD agent (Schwebke *et al.*, 2011). The disease is characterized in female patients by frothy-greenish-foul smelling vaginal discharge accompanied with vulvo-vaginal irritation, dysuria and lower abdominal pains. This disease has important medical, social, and economical implications. Women who are infected

during pregnancy are predisposed to premature rupture of the placental membranes, premature labor, and low-birth-weight infants. Also linked to this disease are cervical cancer (Kharsany *et al.*, 1993) atypical pelvic inflammatory disease (Grodstein, *et al.*, 1993), and infertility (Heine and McGregor. 1993). Diagnosed infections are associated with premature birth, low birth weight or post abortion consequences (Cruetitti *et al.*, 2011). The prevalence of *T. vaginalis* infections vary from country to country. It has been estimated that prevalence among women varied from 0.4 to 27.4% while among men, the prevalence is lower (0.0 to 5.6%) and infection is often asymptomatic. Infection in men can be present in the prostate, seminal vesicles, and epididymis. Complications are rare, but can potentially lead to genitourinary inflammation disease, sterility, scanty clear to mucopurulent discharge, dysuria and non-gonococcal urethral disease. Infections are usually mild with no symptoms, thus making men potential carriers (Dauda, 2004 and Swygard *et al.*, 2004). Spontaneous resolution of infection is common as the oxidative nature of the male genital tract is speculated to be inhibitory to pathogenic factors of infection, which usually remains for ten days or less.

Although certain sign and symptoms are predictive for *Trichomoniasis*, the detection of the parasite is necessary to establish the diagnosis. Diagnosis of *Trichomoniasis* based solely on clinical signs and symptoms is unreliable because the spectrum of infection is broad and other sexually transmitted pathogens can cause similar signs and symptoms (Krieger and Alderete, 2000). Different diagnostic techniques such as wet mount (Ozdemir *et al.*, 2011; Fule *et al.*, 2012), culture and staining (Ertabaklar *et al.*, 2011) and polymerase chain reaction (PCR) methods (Stemmer *et al.*, 2012) are generally used in the diagnosis of *Trichomoniasis*. Comparison of different methods showed that wet mount microscopy and culture have a good chance of detection of *T. vaginalis* infection due to its sensitivity (60%) and specificity (100%). The present study therefore aims at investigating the prevalence of *Trichomoniasis* among females within Aba North Local Government area of Abia State, Nigeria.

MATERIALS AND METHOD

STUDY AREA

This study was conducted in Aba, Abia State Nigeria. Aba lies between a latitude of 5⁰ 07⁰N and longitude of 7⁰ 22¹E and 205 m (673 ft) above sea level. It is a major settlement and commercial centre in a region that is surrounded by small towns and villages. The inhabitants are predominantly traders, farmers, public / civil servants.

SAMPLE COLLECTION

High vaginal swabs (HVS) were collected from hundred (100) women that were randomly selected from public

health facilities within. Sterile swab sticks were aseptically used in collecting the HVS samples after obtaining informed consent of the patients and they were immediately transported to the microbiology laboratory of Abia State Polytechnic Aba for Analysis. A wet smear (wet mount) was made of each HVS, immediately after collection in a drop of physiological saline on a clean glass slide covered with a cover slip and examined microscopically for the quick jerky motion of the protozoa. Both microscopically trichomonas negative and positive HVS samples were cultured in Oxoid Trichomonas broth medium enriched with sterile bovine serum (Flow Laboratories, U.K.). The cultures were incubated at 37°C and wet mount preparations from it were examined at 24 hourly intervals for seven days before they were discarded as negative.

RESULTS

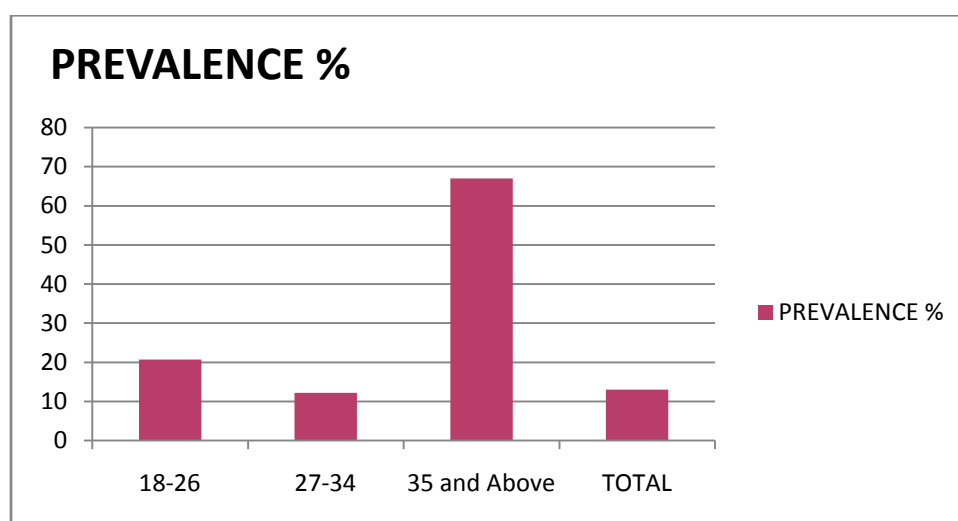


Figure 1: Age Related Prevalence of *Trichomonas vaginalis* among Women in Aba North

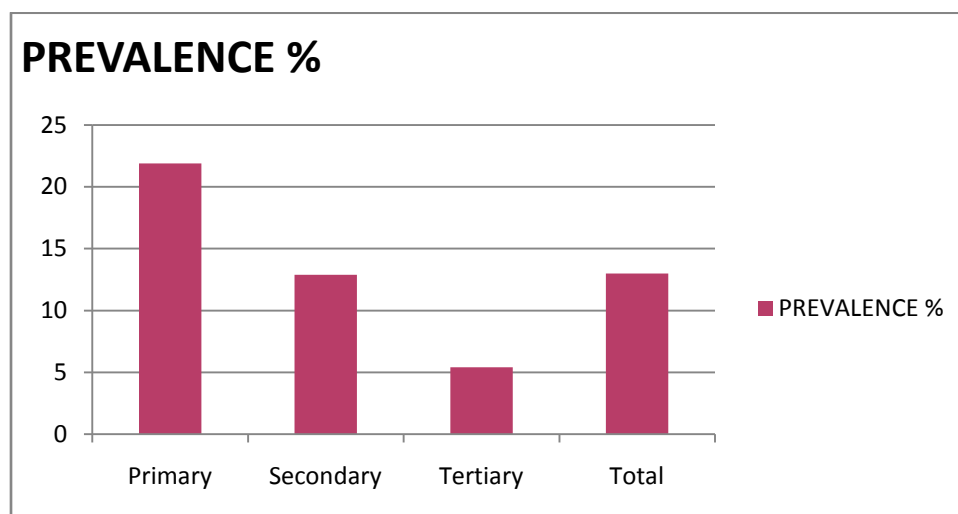


Figure 2: Prevalence of *Trichomonas vaginalis* among Women in Aba North with respect to Education.

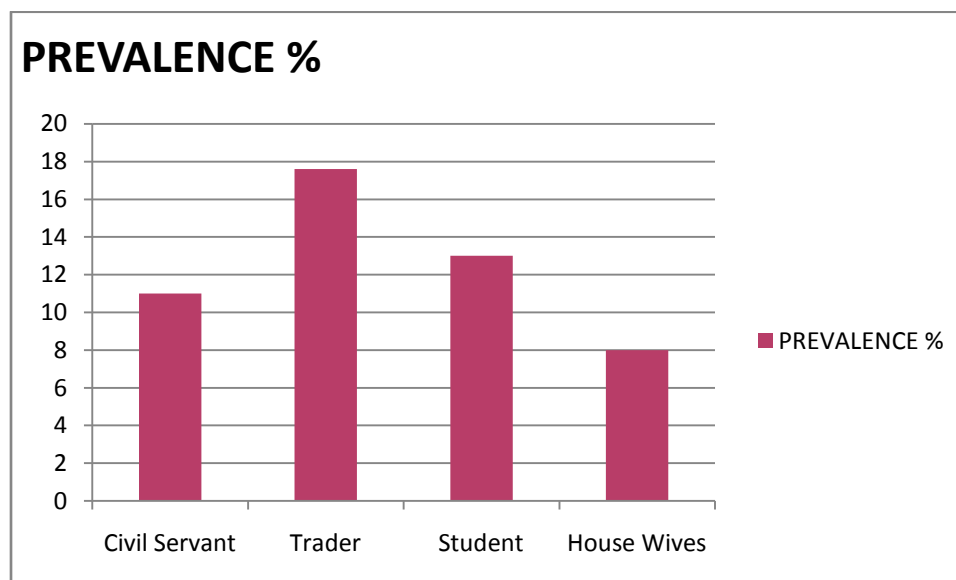


Figure 3: Prevalence of *Trichomonas vaginalis* among Women in Aba North with respect to Occupation.

DISCUSSION

Trichomoniasis has emerged as one of the common sexually transmitted infections (STI), it is estimated to account for almost half of all curable sexually transmitted infection worldwide and is said to be most prevalent non- viral sexually transmitted infection in the world. In Africa, it is estimated that 2-50% of the female population carries the infection (WHO, 2007). The disease is said to have important medical, social and economic implications (Mahdi *et al.*, 2001).

In the present study, the prevalence of *Trichomoniasis* among females in Aba North was investigated. The result showed that 13% of the study populations were positive for the infection. These findings can be compared to that reported by Okonkwo *et al.*; (2010) who observed a prevalence rate of 12.35% in Abakiliki, southern Nigeria. Marriga *et al.*, (2011) also reported similar findings in Maiduguri Nigeria, at a prevalence rate of 10.99%. However, Aboyeji, (2003) and Usanga, (2010) reported a much lesser prevalence rate of 4.7% in Ilorin and 5.2% in Calabar respectively. From the observed findings, the prevalent rate of *Trichomonas vaginalis* was higher among women within the age of 18-26 compared to other age groups. This finding is in line with that reported by other researchers (Jatar *et al.*, 2006). In their study, they reported similar high prevalence among these age groups which are mostly students, they also stated that these findings could possibly be due to the fact that this group of women are sexually active. Also the prevalence may be high in women in the developing world and in minority group within industrialized population. However, no particular age group was entirely free from the infection.

The prevalence as regards to educational level showed that those with little or no education have the highest prevalence. This supports the findings of earlier report by Aboyeji, (2003) in Ilorin who stated that low level of education was associated with significant *Trichomonas vaginal* infection among pregnant women. This high prevalence of *Trichomoniasis* may be attributed to little or no attention given to this disease of public health importance. This observation was also reported by Acholonu (1998) and Petrin *et al.*, (1998). They observed that *Trichomoniasis* is the most prevalent sexually transmitted parasitic infection worldwide, yet appears to be highly neglected. Furthermore, the prevalence rate with respect to occupation shows that traders have the higher prevalence (17.6%) followed by students (13.0%) than civil servants (11.0%). The lowest prevalence (8.0%) was in house wives. The high rate of infection amongst the traders may be attributed to their socio-economic status. This agrees with previous work by Stray *et al.*, (2000) and Woken (2006) they observed that high prevalence of infection among traders could be as a result of their social life typified with little or no personal hygiene.

Trichomonas vaginalis is transmitted from one person to another mainly through sexual intercourse although other means of transmission have been implicated such as toilet seats, contaminated underwear's, towel, examination equipment etc (Smyth, 1996, Njoku *et al.*, 2001) Ukoli, (1990) stated that other means of vaginal contamination apart from sexual intercourse maybe as a result of the non-venereal mode of transmission of the parasite which may remain viable in urine on lavatory seats for 30-45 minutes. He emphasized that such agents undoubtedly occur especially in area with poor environmental and personal hygiene and woman with their open biological nature could easily be infected. Women are at greater risk of contacting *Trichomoniasis* than their male counterparts and are mainly reservoirs while males disseminate the parasite. The anatomical structure of women also makes them more vulnerable.

In Nigeria, it has been reported by previous researchers that Sexually Transmitted Disease (STD) has been blamed on increase in poverty, unemployment and violence among women and children (Obiajuru, 2004, Ulogu *et al.*, 2007), among other factors, sexual recklessness, lack of awareness, ignorance of the public health implications, poor sanitations and poor personal hygiene are other risk factors of *Trichomoniasis*.

CONCUSSION

Considering the increasing prevalence rate of *Trichomoniasis* around the country as earlier reported, there is therefore need for proper and routine screening of women for the infection and appropriate treatment be given early to prevent the spread of STIs. Emphasis should be placed on the youths, those with low educational background and the business women. Also, there is need for public health education by religious organization, relevant

governmental and non-governmental agencies to enlighten the community on girl child education, safe sex and good hygiene and to institute policies that will make health care services cheap and readily affordable. Hence buildings a sustained culture of restraint and prevention will go a long a way to reducing to minimum if not complete eradication of sexually transmitted diseases.

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